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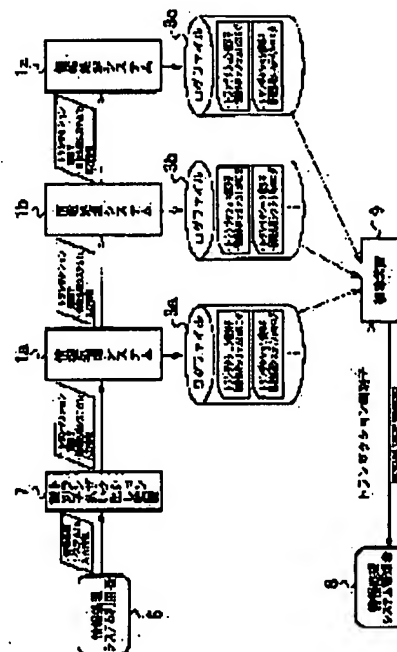
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HANAKI SABURO**(54) INFORMATION PROCESSING TRACEABILITY SECURING METHOD AND DEVICE, AND INFORMATION PROCESSING TRACEABILITY SECURING PROGRAM AND RECORDING MEDIUM WITH THE PROGRAM RECORDED THEREON**

(57)Abstract:

**PROBLEM TO BE SOLVED:** To provide an information processing traceability securing method and a device, and an information processing traceability securing program and a recording medium with the program recorded thereon, which can appropriately and easily trace information processing when a plurality of information processing systems are associated to perform information processing.

**SOLUTION:** To the input information for information processing with which a plurality of information processing systems 1 are associated to perform, a transaction identifier delivery device 7 uniquely delivers and adds a unique transaction identifier, and inputs the input information to the information processing systems. To a log and output information that have been generated as the result of the performing of information processing based on the input information, the transaction identifier is added and the log and the output information are outputted to log files 3, which, if the output information with the transaction identifier added is inputted to, add transaction identifiers to the log and the output information that are generated as the result of the performing of information processing based on the output information, and output the log with the transaction identifier added to the log files.



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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the record medium which recorded the information processing traceability security side method and equipment which can secure the traceability of each information processing so that it can check whether each information processing has been performed correctly, the information processing traceability secured program, and this program, when processing information by making two or more information processing system cooperate.

[0002]

[Description of the Prior Art] When processing information by making two or more information processing system cooperate, in order to check whether information processing has been performed correctly, it is necessary to pursue this information processing.

[0003] It is being checked whether conventionally, associated each log probable with time stumps, such as time amount by which the log outputted with processing of each information processing system was generated, pursued information processing, or discovered manually the log related out of the log file of each information processing system, and information processing has been performed accurately.

[0004]

[Problem(s) to be Solved by the Invention] Although two or more logs with the same time stump may exist like by the approach by the conventional time stump mentioned above when carried out by information processing concentrating on specific time amount, it cannot perform associating the log about information processing at a meaning in such a case probable, and there is a problem that it is difficult to pursue information processing correctly.

[0005] Moreover, by the approach of the handicraft of discovering manually the log related out of the log file of each information processing system, and checking it in order to perform a trace of a certain information processing conventionally, a trace of information processing takes time amount and the problem of being it being inaccurate and inefficient-like is in the top where it is difficult to carry out for a short time.

[0006] This invention was made in view of the above, and the place made into the purpose is to offer the record medium which recorded the information processing traceability security side method and equipment which can pursue information processing in the case of processing information by making two or more information processing system cooperate accurately and easily, the information processing traceability secured program, and this program.

[0007]

[Means for Solving the Problem] In order to attain the above-mentioned purpose, this invention according to claim 1 When processing information by making two or more information processing system cooperate, the transaction identifier of a proper is paid out to this information processing to the input to this information processing at a meaning. The input to which this transaction identifier was added to said input, and this transaction identifier was added is inputted into said information processing system. The transaction identifier added to this input to the log and print-out which are generated as a

result of having processed information based on said input in this information processing system is added, respectively. The log to which this transaction identifier was added is stored in the storage means of the information processing system concerned. When the print-out to which said transaction identifier was added is inputted into other information processing system Said transaction identifier is added to the log and print-out which are generated as a result of having processed information based on the print-out from other information processing system with which this transaction identifier was added in these other information processing system, respectively. Let it be a summary to store in the storage means of these other information processing system the log to which this transaction identifier was added.

[0008] If it is in this invention according to claim 1, the transaction identifier of a proper is paid out and added to the input to the information processing performed by making two or more information processing system cooperate at a meaning. The input to which the transaction identifier was added is inputted into information processing system. A transaction identifier is added to the log and print-out which are generated as a result of having processed information based on input in information processing system. When the print-out to which the log to which this transaction identifier was added was stored in the storage means, and the transaction identifier was added is inputted into other information processing system A transaction identifier is added to the log and print-out which are generated as a result of having processed information based on the print-out from other information processing system with which the transaction identifier was added. Since the log to which this transaction identifier was added is stored in a storage means, It takes time amount like the difficulty of the traceability by the time stamp which exist like before by searching a log based on a transaction identifier, or handicraft. Even when there is also no fault that they are that it is inaccurate and inefficient-like, and the information processing in two or more information processing system can be pursued accurately, for example, abnormalities occur, it can specify accurately to which input abnormalities occurred.

[0009] Moreover, in invention according to claim 1, this invention according to claim 2 searches the storage means of each information processing system based on the transaction identifier added to said input, and makes it a summary to extract the log to which the transaction identifier concerned was added from a storage means.

[0010] If it is in this invention according to claim 2, even when the storage means of each information processing system was searched based on the transaction identifier added to input, the information processing in two or more information processing system can be accurately pursued since the log to which the transaction identifier concerned was added is extracted from a storage means, for example, abnormalities occur, it can specify accurately to which input abnormalities occurred.

[0011] Furthermore, this invention according to claim 3 pays out the transaction identifier of a proper at a meaning to this information processing to the input to this information processing, when processing information by making two or more information processing system cooperate. A transaction identifier expenditure means to add this transaction identifier to said input, In the information processing system into which the input to which it was prepared in each of two or more of said information processing system, and said transaction identifier was added was inputted And the print-out to which said transaction identifier outputted from other information processing system in each information processing system was added sets to the information processing system inputted as input. A transaction identifier addition means to add the transaction identifier added to this input to the log and print-out which are generated as a result of having processed information based on this input, respectively, and to output it, It is prepared in relation to each of two or more of said information processing system, and let it be a summary to have a storage means to store the log to which the transaction identifier outputted from each information processing system was added.

[0012] If it is in this invention according to claim 3, the transaction identifier of a proper is paid out and added to the input to the information processing performed by making two or more information processing system cooperate at a meaning. The input to which the transaction identifier was added is inputted into information processing system. A transaction identifier is added to the log and print-out which are generated as a result of having processed information based on input in information

processing system. When the print-out to which the log to which this transaction identifier was added was stored in the storage means, and the transaction identifier was added is inputted into other information processing system A transaction identifier is added to the log and print-out which are generated as a result of having processed information based on the print-out from other information processing system with which the transaction identifier was added. Since the log to which this transaction identifier was added is stored in a storage means, It takes time amount like the difficulty of the traceability by the time stamp which exist like before by searching a log based on a transaction identifier, or handicraft. Even when there is also no fault that they are that it is inaccurate and inefficient-like, and the information processing in two or more information processing system can be pursued accurately, for example, abnormalities occur, it can specify accurately to which input abnormalities occurred.

[0013] In invention according to claim 3, this invention according to claim 4 searches said storage means based on the transaction identifier added to said input, and makes it a summary to have a retrieval means to extract the log to which the transaction identifier concerned was added from a storage means.

[0014] If it is in this invention according to claim 4, even when the storage means of each information processing system was searched based on the transaction identifier added to input, the information processing in two or more information processing system can be accurately pursued since the log to which the transaction identifier concerned was added is extracted from a storage means, for example, abnormalities occur, it can specify accurately to which input abnormalities occurred.

[0015] Moreover, this invention according to claim 5 pays out the transaction identifier of a proper at a meaning to this information processing to the input to this information processing, when processing information by making two or more information processing system cooperate. The input to which this transaction identifier was added to said input, and this transaction identifier was added is inputted into said information processing system. The transaction identifier added to this input to the log and print-out which are generated as a result of having processed information based on said input in this information processing system is added, respectively. The log to which this transaction identifier was added is stored in the storage means of the information processing system concerned. When the print-out to which said transaction identifier was added is inputted into other information processing system Said transaction identifier is added to the log and print-out which are generated as a result of having processed information based on the print-out from other information processing system with which this transaction identifier was added in these other information processing system, respectively. Let it be a summary to store in the storage means of these other information processing system the log to which this transaction identifier was added.

[0016] If it is in this invention according to claim 5, the transaction identifier of a proper is paid out and added to the input to the information processing performed by making two or more information processing system cooperate at a meaning. The input to which the transaction identifier was added is inputted into information processing system. A transaction identifier is added to the log and print-out which are generated as a result of having processed information based on input in information processing system. When the print-out to which the log to which this transaction identifier was added was stored in the storage means, and the transaction identifier was added is inputted into other information processing system A transaction identifier is added to the log and print-out which are generated as a result of having processed information based on the print-out from other information processing system with which the transaction identifier was added. Since the log to which this transaction identifier was added is stored in a storage means, It takes time amount like the difficulty of the traceability by the time stamp which exist like before by searching a log based on a transaction identifier, or handicraft. Even when there is also no fault that they are that it is inaccurate and inefficient-like, and the information processing in two or more information processing system can be pursued accurately, for example, abnormalities occur, it can specify accurately to which input abnormalities occurred.

[0017] Furthermore, in invention according to claim 5, this invention according to claim 6 searches the storage means of each information processing system based on the transaction identifier added to said

input, and makes it a summary to extract the log to which the transaction identifier concerned was added from a storage means.

[0018] If it is in this invention according to claim 6, even when the storage means of each information processing system was searched based on the transaction identifier added to input, the information processing in two or more information processing system can be accurately pursued since the log to which the transaction identifier concerned was added is extracted from a storage means, for example, abnormalities occur, it can specify accurately to which input abnormalities occurred.

[0019] This invention according to claim 7 pays out the transaction identifier of a proper at a meaning to this information processing to the input to this information processing, when processing information by making two or more information processing system cooperate. The input to which this transaction identifier was added to said input, and this transaction identifier was added is inputted into said information processing system. The transaction identifier added to this input to the log and print-out which are generated as a result of having processed information based on said input in this information processing system is added, respectively. The log to which this transaction identifier was added is stored in the storage means of the information processing system concerned. When the print-out to which said transaction identifier was added is inputted into other information processing system Said transaction identifier is added to the log and print-out which are generated as a result of having processed information based on the print-out from other information processing system with which this transaction identifier was added in these other information processing system, respectively. Let it be a summary to record the information processing traceability secured program which stores in the storage means of these other information processing system the log to which this transaction identifier was added on a record medium.

[0020] If it is in this invention according to claim 7, the transaction identifier of a proper is paid out and added to the input to the information processing performed by making two or more information processing system cooperate at a meaning. The input to which the transaction identifier was added is inputted into information processing system. A transaction identifier is added to the log and print-out which are generated as a result of having processed information based on input in information processing system. When the print-out to which the log to which this transaction identifier was added was stored in the storage means, and the transaction identifier was added is inputted into other information processing system A transaction identifier is added to the log and print-out which are generated as a result of having processed information based on the print-out from other information processing system with which the transaction identifier was added. Since the information processing traceability secured program which stores in a storage means the log to which this transaction identifier was added is recorded on the record medium, the distributivity can be raised using this record medium.

[0021] Moreover, in invention according to claim 7, this invention according to claim 8 searches the storage means of each information processing system based on the transaction identifier added to said input, and makes it a summary to record the information processing traceability secured program which extracts the log to which the transaction identifier concerned was added from a storage means on a record medium.

[0022] If it is in this invention according to claim 8, based on the transaction identifier added to input, the storage means of each information processing system is searched, and since the information processing traceability secured program which extracts the log to which the transaction identifier concerned was added from a storage means is recorded on the record medium, the distributivity can be raised using this record medium.

[0023]

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained using a drawing. Drawing 1 is the block diagram showing the configuration of the equipment which enforces the information processing traceability security side method concerning 1 operation gestalt of this invention. When processing information by making two or more information processing system cooperate, the information processing traceability security side method of this operation gestalt can pursue each information processing accurately and easily so that it can check whether information

processing with each information processing system has been performed correctly.

[0024] In drawing 1, it is two or more information processing system 1a and 1b and the information processing system which processes information by --1z cooperating mutually, and the log generated as a result of the information processing performed in two or more of such information processing system 1a and 1b and each of --1z is outputted and stored in the log files 3a and 3b and --3z which constitute a storage means, respectively.

[0025] Transaction identifier expenditure equipment 7 is connected to two or more information processing system 1a and 1b and the input of information-processing-system 1 of --1z a, and it is inputted into information-processing-system 1a after a transaction identifier is added to the input to information-processing-system 1a from the information-processing-system user 5 in transaction identifier expenditure equipment 7. That is, if the input from the information-processing-system user 5 to information-processing-system 1a is supplied to transaction identifier expenditure equipment 7, it will pay out the transaction identifier of a proper at a meaning to this input, and will add this transaction identifier to input.

[0026] And the input to information-processing-system 1a to which this transaction identifier was added is supplied to information-processing-system 1a, and information processing based on this input is performed in information-processing-system 1a. Thus, the log to which the same transaction identifier also as the log generated as a result of having processed information by information-processing-system 1a was added, and this transaction identifier was added is outputted and stored in log file 3a from information-processing-system 1a.

[0027] Moreover, it is inputted for example, into information-processing-system 1b whose print-outs from information-processing-system 1a to which the transaction identifier same from information-processing-system 1a also as a print-out was added, and this transaction identifier was added are other information processing system 1. In this information-processing-system 1b, information processing is performed based on the print-out from information-processing-system 1a to which this transaction identifier was added. And the same transaction identifier also as the log generated from information-processing-system 1b as a result of having performed this information processing is added, and it is outputted and stored in log file 3b from information-processing-system 1b.

[0028] Furthermore, the print-out from information-processing-system 1b to which the transaction identifier same from information-processing-system 1b also as a print-out was added, and this transaction identifier was added similarly is inputted into other information processing system 1, and same processing is performed by each information processing system 1.

[0029] And finally, it is inputted into information-processing-system 1z, and, as for the print-out from the front information processing system 1, information processing is similarly performed based on the print-out from the information processing system 1 before the same transaction identifier was added in this information-processing-system 1z. And the same transaction identifier also as the log generated from information-processing-system 1z as a result of having performed this information processing is added, and it is outputted and stored in log file 3z.

[0030] Thus, the same transaction identifier will be added to each log which processed information in each information processing system 1 and which was generated with each information processing system 1 as a result, and it will be outputted and stored in a log file 3.

[0031] As mentioned above, since a transaction identifier is added and it is stored in a log file 3, each log of the information processing performed with each information processing system 1 can extract all the target logs accurately by searching each log file 3 with retrieval equipment 9 based on a transaction identifier to extract the log about a certain information processing.

[0032] That is, if the transaction identifier specified by the information-processing-system manager 8 who manages each information processing system 1 is inputted, retrieval equipment 9 will search two or more log files 3a and 3b by this inputted transaction identifier, and --3z, and will extract the log of the information processing about the transaction identifier concerned. And the log of the processing extracted in this way will be outputted as information processing trace information, for example, will be arranged in order of processing; and the information-processing-system manager 8 will be shown it.



Consequently, the information-processing-system manager 8 can pursue now accurately the information processing performed from this shown processing by cooperating by two or more information processing system 1a and 1b and --1z.

[0033] Next, other operation gestalten of this invention are explained with reference to drawing 2. Drawing 2 is the block diagram showing the configuration of the equipment which enforces the information processing traceability security side method concerning other operation gestalten.

[0034] This operation gestalt applies the information processing traceability security side method of this invention to two or more subsystems 11a and 11b and the information processing system 10 with which information processing is performed by --11z. Moreover, the log generated as a result of the information processing performed in two or more of these subsystems 11a and 11b of each and each of --11z is outputted and stored in log files 13a and 13b and --13z, respectively. Other configurations are the same as drawing 1, and the same sign is given to the same component. In addition, each subsystem 11 consists of information processing system.

[0035] In the configuration mentioned above, if the information-processing-system user 5 supplies input to information processing system 10, this input is supplied to transaction identifier expenditure equipment 7, and in transaction identifier expenditure equipment 7, the transaction identifier of a proper will pay out it to a meaning and it will be added to this input. in addition -- the case where information processing system 10 is applied to the accounting system besides paying a meaning out of transaction identifier expenditure equipment 7 as the transaction identifier was mentioned above -- the credit of a credit card -- it is also possible to use a meaning acknowledgement number [ which is paid out by processing ] number.

[0036] The input to which the transaction identifier was added as mentioned above is inputted into subsystem 11a, and information processing based on this input is performed in this subsystem 11a. Thus, the log to which the same transaction identifier also as the log generated as a result of having processed information by subsystem 11a was added, and this transaction identifier was added is outputted and stored in log file 13a from subsystem 11a.

[0037] Moreover, the print-out from subsystem 11a to which the transaction identifier same from subsystem 11a also as a print-out was added, and this transaction identifier was added is inputted into subsystem 11b. In this subsystem 11b, information processing is similarly performed based on the print-out from subsystem 11a to which this transaction identifier was added. And the same transaction identifier also as the log generated from subsystem 11b as a result of having performed this information processing is added, and it is outputted and stored in log file 13b from subsystem 11b.

[0038] Furthermore, the print-out from subsystem 11b to which the transaction identifier same from subsystem 11b also as a print-out was added, and this transaction identifier was added similarly is inputted into other subsystems 11, and same processing is performed by each subsystem 11.

[0039] And finally, it is inputted into subsystem 11z and, as for the print-out from the front subsystem 11, information processing is similarly performed based on the print-out from the subsystem 11 before the same transaction identifier was added in this subsystem 11z. And the same transaction identifier also as the log generated from subsystem 11z as a result of having performed this information processing is added, and it is outputted and stored in log file 13z.

[0040] As mentioned above, the same transaction identifier will be added to each log which processed information in each subsystem 11 and which was generated with each subsystem 11 as a result, and it will be outputted and stored in a log file 13. All the target logs can be extracted by searching each log file 13 with retrieval equipment 9 based on a transaction identifier to extract the log about a certain information processing.

[0041] That is, if the transaction identifier specified by the information-processing-system manager 8 is inputted into retrieval equipment 9, two or more log files 13a and 13b by this transaction identifier and -13z will be searched, and all the logs of the information processing about the transaction identifier concerned will be extracted. And the log of the processing about the transaction identifier extracted in this way is arranged in order of processing, and the information-processing-system manager 8 is shown it as information processing trace information. Consequently, the information-processing-system

manager 8 can pursue accurately the information processing performed from this shown processing by cooperating by two or more subsystems 11a and 11b and --11z.

[0042] In addition, it records on record media, such as CD and FD, by considering procedure of the information processing traceability security side method of the above-mentioned operation gestalt as a program. A communication line is minded for the program recorded on building this record medium into a computer system \*\*\*\*, or a record medium. Download to a computer system or Or by installing from a record medium and operating a computer system by this program It is natural that it can be made to function as information processing traceability secured equipment which enforces an information processing traceability security side method, and the distributivity can be raised by using such a record medium.

[0043]

[Effect of the Invention] As explained above, according to this invention, the transaction identifier of a proper is paid out and added to the input to the information processing performed by making two or more information processing system cooperate at a meaning. Input this input into information processing system, and a transaction identifier is added to the log and print-out which are generated as a result of having processed information based on input in information processing system. Also when the print-out to which the log to which this transaction identifier was added was stored in the storage means, and the transaction identifier was added is inputted into other information processing system, similarly A transaction identifier is added to the log and print-out which are generated as a result of having processed information based on the print-out from other information processing system with which the transaction identifier was added. Since the log to which this transaction identifier was added is stored in a storage means It takes time amount like the difficulty of the traceability by the time stump which exist like before by searching a log based on a transaction identifier, or handicraft. Even when there is also no fault that they are that it is inaccurate and inefficient-like, and the information processing in two or more information processing system can be pursued accurately, for example, abnormalities occur, it can specify accurately to which input abnormalities occurred.

[0044] Moreover, since the log to which the storage means of each information processing system was searched based on the transaction identifier added to input, and the transaction identifier concerned was added is extracted from a storage means according to this invention, even when the information processing in two or more information processing system can be pursued accurately, for example, abnormalities occur, it can specify accurately to which input abnormalities occurred.

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[Translation done.]